

## **AMENDMENTS TO THE CLAIMS**

The following listing of claims will replace all prior versions and listings of claims in the application.

### **LISTING OF CLAIMS**

1. (Currently Amended) A dishwasher comprising:

a heating element adapted to heat water in the dishwasher, the heating element having a resistance adapted to change in response to the water temperature in the dishwasher; and

a data processing unit coupled to the heating element operative to measure the resistance of the heating element and determine the water temperature in the dishwasher using the resistance measurement.

2. (Original) The dishwasher of claim 1, further comprising a control panel for providing a plurality of wash cycles.

3. (Original) The dishwasher of claim 2, wherein the selection of at least one of the plurality of wash cycles sets a target resistance for the heating element and a desired water temperature for the dishwasher.

4. (Original) The dishwasher of claim 3, wherein the target resistance corresponds to the desired water temperature for the selected wash cycle and is selected from a plurality of pre-stored data including a plurality of target resistances that correspond to a plurality of water temperatures.

5. (Original) The dishwasher of claim 3, wherein the data processing unit is operative to control the heating element to reach the target resistance.

6. (Original) The dishwasher of claim 3, wherein the data processing unit is operative to calculate a period of time for energizing the heating element to reach the target resistance.

7. (Original) The dishwasher of claim 6, further comprising a timer in connection with the data processing unit for energizing the heating element for the calculated period of time.

8. (Original) The dishwasher of claim 1, further comprising a water valve coupled to a water supply for providing water to the dishwasher.

9. (Original) The dishwasher of claim 8, wherein the data processing unit is operative to control the water valve to open and close.

10. (Original) The dishwasher of claim 1, wherein the heating element has a positive temperature coefficient characteristic.

11. (Currently Amended) A dishwasher comprising:

a heating element operative to heat water in the dishwasher and to change in resistance in response to the water temperature in the dishwasher;

a processing system coupled to the heating element, the system is operative to measure the resistance of the heating element and determine the water temperature in the dishwasher using the resistance measurement;

a control panel coupled to the processing system, the control panel is operative to set a target resistance and a desire desired water temperature;

a water supply operative to provide water to the dishwasher;

a valve device coupled to the water supply, the valve device is operative to open and close the supply of water flowing in the dishwasher from the water supply; and

a timer coupled to the processing system, the timer is operative to control the function of the heating element.

12. (Original) The dishwasher of claim 11, wherein the control panel includes a plurality of wash cycles where the selection of at least one of the plurality of wash cycles sets the target resistance and the desired water temperature.

13. (Original) The dishwasher of claim 11, wherein the processing system along with the timer is operative to calculate a length of time for energizing the heating element to reach the target resistance and the desired water temperature.

14. (Original) The dishwasher of claim 11, wherein the target resistance corresponds to the desired water temperature.

15. (Original) The dishwasher of claim 11, wherein the resistance of the heating element corresponds to the water temperature in the dishwasher.

16. (Original) The dishwasher of claim 11, wherein the heating element has a positive temperature coefficient characteristic.

17-29. (Canceled)

30. (New) A household washing appliance of the type that is connected to a household water supply, the household washing appliance comprising:

a heating element for heating water supplied to the appliance to a desired temperature, the heating element having a resistance which is adapted to vary with the temperature of the water in the appliance; and

a processing unit controlling the operation of the heating element, the processing unit measuring the resistance of the heating element and comparing a measured resistance with a target resistance.

31. (New) The household washing appliance of claim 30, wherein the heating element has a positive temperature coefficient characteristic.

32. (New) The household washing appliance of claim 30, wherein the measured resistance of the heating element corresponds to the temperature of the water in the appliance, and wherein the target resistance corresponds to the desired temperature.

33. (New) The household washing appliance of claim 32, further comprising:

a user input interface comprising a selector switch, and wherein a state of the selector switch defines the target resistance;

a valve coupled to the household water supply, the valve controlling the supply of water from the household water supply to the appliance; and

wherein the processing unit comprises a data processor and a timer.

34. (New) The household washing appliance of claim 33, wherein the processing unit controls the operation of the valve.

35. (New) The household washing appliance of claim 33 wherein the user input interface further comprises a control panel operably coupled to the processing unit, the control panel defining a plurality of wash cycles, and the selector switch being operable to select at least one of the plurality of wash cycles.

36. (New) The household washing appliance of claim 35 wherein the selection by the selector switch of at least one of the plurality of wash cycles sets the target resistance.

37. (New) The household washing appliance of claim 32, wherein the processing unit is operable to calculate a time period during which the heating element is energized in order to achieve the desired water temperature.

38. (New) A household washing appliance of the type that is connected to a household water supply, the household washing appliance comprising:

- a valve coupled to the household water supply;
- a user input interface;
- a heating element for heating water supplied to the appliance to a desired temperature, the heating element having a resistance which is adapted to vary with the temperature of the water in the appliance; and
- a processing unit controlling the operation of the heating element, measuring the resistance of the heating element, and comparing a measured resistance with a target resistance.

39. (New) A household washing appliance of the type that is connected to a household water supply, the household washing appliance comprising:

- a valve coupled to the household water supply;
- a user input interface;
- a heating element for heating water supplied to the appliance to a desired temperature, the heating element having a resistance which is adapted to vary with the temperature of the water in the appliance; and
- a processing unit controlling the operation of the heating element, measuring the resistance of the heating element, and comparing a measured resistance with a target resistance, the processing unit operable to calculate a time period during which the heating element is energized in order to achieve the desired water temperature.